

ATTENDANT MONITOR

Operations Manual

NEC America, Inc.

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Chapter 1 INTRODUCTION

This manual provides the information needed to configure and operate the **Attendant Monitor** software application.

How To Use This Manual

This manual describes the various screens, windows and functions for the installation, configuration and operation of *Attendant Monitor*. Examples of displayed screens and step-by-step procedures are shown in the following chapters. The procedural steps to perform a given task are given in sequence and marked as shown below:

Step 1: From the Main Menu, select...

Manual Organization

Chapter 1 - Introduction

This chapter details how to use this manual, the actual manual organization, and an overview of the *Attendant Monitor* application.

Chapter 2 - Installation and Configuration

Chapter 2 describes how to install and configure the application, along with the key usage conventions, main menu screen, and an overview of the main menu functions.

Chapter 3 - Administrator Tasks

This chapter describes the various functions and tasks available to maintain the *Attendant Monitor* databases.

Chapter 4 - Attendant Tasks

Chapter 4 describes the basic attendant functions and tasks.

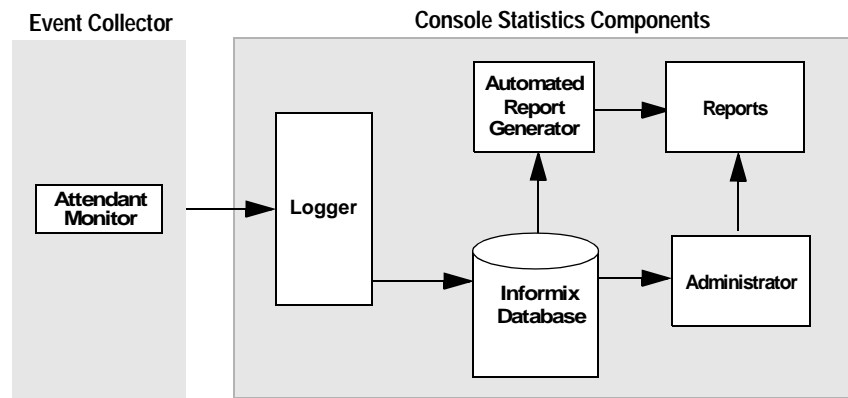
What is *Attendant Monitor*?

Overview

Attendant Monitor is an application that will accumulate attendant statistics when attendant consoles are used in a stand alone environment. *Attendant Monitor* serves as the event collector for the Attendant Console Statistics application, detecting events generated by the attendants and the PBX, and sending messages to the Attendant Console Statistics Logger component. The Logger parses the messages and saves the statistic data in an Informix Database. The data is then used to generate attendant statistic reports.

Note: *Attendant Monitor* is not required if Attendant Console Statistics is used with the Hospitality Center System (HCS) or the Medical Center System (MCS), since these applications serve as event collectors.

The following diagram illustrates how *Attendant Monitor* interfaces with the Attendant Console Statistics application.



Chapter 2 INSTALLATION & CONFIGURATION

This chapter provides a step-by-step description of the installation, initial configuration, and Main Menu functions for *Attendant Monitor*. Before proceeding with the configuration, ensure that the SCO UNIX operating system and the Applications Manager (APM) platform software are installed on the system.

The *Applications Manager Operations Manual* provides detailed instructions for using the APM menus and for completing the data entry screens illustrated in this manual. NEAX2400 IMS system manuals provide the procedures for making the data assignments at the NEAX MAT.

Installation Procedure

This section describes the procedures to install the *Attendant Monitor* application software. Follow the procedure below to install the software.

Note: *Some keyboards use a marked **Return** key for the carriage return function. Other keyboards mark this function key as **Enter**. The installation procedure will identify this function as **Return (Enter)**. When the procedure indicates, use the appropriate marked key on your particular keyboard.*

```
login: apmadm
password:
```

To begin the *Attendant Monitor* software installation, type **apmadm** at the UNIX login prompt and press **Enter**.

(If your “apmadm” account requires a password, enter the “apmadm” password at the subsequent password prompt.)

Continue with the installation on the following pages...

```

NEC America                APM Administration                Wed - Oct 31, 1996

      APM Platform Release Rel2.3 (May 22, 1996)

      Main Menu
      APM
      Debug Facilities
      Halt APM System
      File Archive
      Installation of Applications/Packages
      PBX Simulator
      Removal of Packages
      Start-up APM System

      Logout
      UNIX

      Enter Option: [i]

      APM Status: ACTIVE
    
```

APM Administration Main Menu.

Type 'i' in the "Enter Option: []" field to select "Installation of Applications/Packages" and press **Enter**.

Note: *The APM Platform release and date may vary from this example.*

```

NEC America                APM Administration                Wed - Oct 31, 1996

      Installation of Applications/Packages

      Available Packages are:

      applications  asl  mtl  tcpip  uapname  uucp  x25

      Enter Package to be installed:  applications
    
```

Attendant Monitor is an application. When prompted for the package to be installed, type 'applications' and press **Enter**.

```

NEC America                APM Administration                Wed - Oct 31, 1996

      Installation of Applications/Packages

      Available Packages are:

      applications  asl  mtl  tcpip  uapname  uucp  x25

      Enter Package to be installed:  applications

      Release Media Devices are:

      (F)loppy Disk Device          (C)artridge Tape Device

      Enter Release Media Device:  F
    
```

You are asked to select the installation media. Type 'F' for "Floppy Disk Device" and press **Enter**.

Note: *The standard Floppy Disk Device will be a 3.5 inch type.*


```

Install Procedure

Installing from /dev/fd0

Insert OAI Application/Update Release Media #1
Enter <Return> to continue:

```

Next, you are requested to insert the *Attendant Monitor* installation diskette in the Floppy Disk Device.

Insert the diskette and press **Enter** to continue.

Note: *The Attendant Monitor installation diskette will be a 3.5 inch type.*

```

Install Procedure

Installing from /dev/fd0

Insert OAI Application/Update Release Media #1
Enter <Return> to continue:
Copying .....
tar: blocksize = 20
x oai/app/attMonitor/install/etc/updstats.Z, 112163 bytes, 220 tape blocks
x oai/app/attMonitor/install/etc/swpcall.Z, 115463 bytes, 226 tape blocks
x oai/app/attMonitor/install/etc/swpattl.Z, 114652 bytes, 224 tape blocks
x oai/app/attMonitor/install/bluebars1.Z, 562 bytes, 2 tape blocks
x oai/app/attMonitor/install/bluebars2.Z, 343 bytes, 1 tape blocks
x oai/app/attMonitor/install/stats_ins.Z, 5263 bytes, 11 tape blocks
x oai/app/attMonitor/install/createAccounts.Z, 947 bytes, 2 tape blocks
x oai/app/consoleStats.ins, 2050 bytes, 5 tape blocks
x oai/chksum_app, 5259 bytes, 11 tape blocks

Has all release media been loaded [y or n] ? y

```

The screen displays the files as they are loaded from the media. Some files may scroll off the screen, until all the files from the diskette have been processed.

You are asked if all of the application release media (diskettes) have been processed. Type **'n'** for any additional diskettes for *Attendant Monitor*. When all diskettes have been loaded, type **'y'** (yes) and press **Enter**.

Note: *The number of bytes, tape blocks, and/or files may vary from this example.*

```

OAI Platform is at revision 6 for machine i386 (May 22 1996 Rel3.1.4)

attMonitor   Revision: 6machine type: i386           Version: Ver3.0.0
Processing, please wait...
Validating installed files
.....
Validation Completed

Looking for installation scripts

Installing the Release Files

Processing files

```

APM installation begins, processing all of the *Attendant Monitor* installation files and checking them for correctness. The screen indicates the status of this installation.

Note: *Some revisions and dates may vary from this example.*

```
NEC America      Attendant Monitor      Wed - Oct 31,1996

Installation Options

  [I]ninstall
  [U]pgrade
  [C]ancel Installation

Enter Option
```

Select the installation option for *Attendant Monitor*. For a new installation, type 'I' and press **Enter**. The installation of files will now begin.

If performing an upgrade, type U and press **Enter**. If you wish to Cancel the installation at this time, type 'C' and press **Enter**.

```
NEC America      Attendant Monitor      Wed - Oct 31,1996

Creating installation directories
Creating backup directories
```

Screen messages show the installation and backup directories being installed.

```
NEC America      Attendant Monitor      Wed - Oct 31,1996

Installing APM database files...
Installing config files...
Installing executable files...
Updating APM Configuration files...
```

Status messages show the installation of various files.

```
NEC America      Attendant Monitor      Wed - Oct 31,1996

Configuring StatLogger
autocfg running...

autocfg: AttenantMonitor      application configured.

autocfg terminated normally.

Press Return to continue installation
```

Status messages show the installation and configuration of the first *Attendant Monitor* main component.

At the prompt, press **Enter** to continue the installation.

```
NEC America      Attendant Monitor      Wed - Oct 31,1996

Setting up info files...

Old files saved in /tmp/attMonitor0, the system deletes these after 7 days.
Apm should now be Terminated and then Re-Initialized and the appropriate
Attendant Monitor APM Database files should be modified.

Installation Complete.
Press Return
```

Status messages show the progress of the *Attendant Monitor* installation. When all files have been set-up by the installer, the *Attendant Monitor* installation is complete.

Press **Enter** to exit this screen and return to the APM Main Menu.

Proceed to the next page to configure the APM and various components...

Application Configuration

Since *Attendant Monitor* is internally supported by the APM, its component must be configured in the APM environment. This section provides the information that must be entered into the APM configuration file.

Attendant Monitor is set-up in the APM system using the **Add** function of the Application Configuration option on the APM System Administration menu.

A Note on Selecting Commands

*In the following procedures, a step may call for pressing the **Tab** key to select a command. It may be necessary to press the **Tab** key multiple times in order to select the specific command. When reading a step, understand to press the **Tab** key (as needed) to select the specified command.*

APM System Configuration

Follow the steps to configure the APM system for *Attendant Monitor*.

- Enter the APM option from the APM Platform Management menu.
- Enter the System Administrator password at the APM password screen.
- Select the **Application Configuration** option from the System Administration menu.

AttendantMonitor Component

Attendant Monitor has one component that must be configured through the APM.

AttendantMonitor – Detects events generated by attendants and the PBX, then sends messages to the Attendant Console Statistics Logger component.

Define the **AttendantMonitor** component Characteristics in the APM environment **exactly** as shown in the table:

Characteristic	Value	Description
OAI Application	Y	Whether (Yes or No) the component communicates with the NEAX2400 using OAI processes.
CRT Application	N	Whether (Yes or No) the component runs on the same screen as the APM, rendering the APM temporarily inaccessible.
Communication Queue	N	Communication Queue whether (Yes or No) the component needs an IPC queue to communicate with other processes.

Primary Configuration Parameters

From the APM Configuration Entry screen, configure the **AttendantMonitor** component as follows. All parameters marked with asterisks (*) should be entered **exactly** as shown. The rest of the entries in the table below are just examples.

Parameter	Entry Value	Description
Application Name	AttendantMonitor	The name to be displayed in the APM menus. This name is displayed as it is entered here — i.e., capital letters, lowercase, etc.
Executable Filename*	/oai/app/attMonitor/ bin/attMonitor	The path name of the executable file.
Group*		The group that the component belongs to. Make no entry.
Response Mode*	l(gnore)	The action that the APM is to take with the component should a member of the group terminate.
Initialization Batch	N(o)	Whether (Yes or No) the component is to be initialized automatically when the OAI system is initialized.
Termination Mode*	M(essage)	How the APM is to notify the component to terminate.
Standard Output	/dev/null	Where any output is sent.
Number of Restarts	0	How many times the APM may restart the component after it terminates in error.

OAI Facilities

Following the instructions in the *APM Operations Manual*, name the following NEAX2400 facilities for the AttendantMonitor component using the **Facilities** command on the APM Configuration Entry screen:

- SCF Switch Control
- SMFR Status Request (R)
- SMFN Status Notification (N)

Continue to the next page for OAI-Conf settings...

OAI-Conf Settings

Use the **OAI-Conf** command on the APM Configuration Entry screen to make the necessary parameter entries. For parameters shown with an asterisk (*) in the table below, make entries exactly as shown. The other parameters are shown with sample entries that may be changed to meet site requirements. Use the instructions provided for this option in the *APM Operations Manual*:

Parameter	Entry Value	Description
Database Name #1*	/oai/db/cur/tenants	The path name of the tenant number database.
Database Name #2*	/oai/db/cur/Attmon	The path name of the Attendant Monitor database.
Timeout Value #1	0	Unused
Timeout Value #2	0	Unused
Tenant Number	1	Default Tenant Number
Source Link Name	OAI1TCP	Port on the source side of the communication link. Entry should match a link name in the APM system configuration file.
Destination Link Name	PBX1TCP	Port on the destination side of the communication link. Entry should match a link name in the APM system configuration file.
Association Recovery	30	Number of seconds Attendant Monitor waits before trying to reestablish an association with the NEAX that has been released.

User-Defined Parameters

No user defined parameters are used in *Attendant Monitor*. Therefore, all user defined parameters are blank.

Continue to the next page for Database Support...

Database Support

Attendant Monitor requires two APM databases: the *Attendant Monitor* database and the Tenant Number Database. These databases are created with default values during initial software installation, but specific records must be added before *Attendant Monitor* is enabled.

Attendant Monitor Database

The *Attendant Monitor* database (**attmon**) consists of a Master Database file component and an Application Database file component.

Master Database File - filename 'attmon'.

The **attmon** master database structure and example entries are shown in the table below.

Field Name	Type	Size	Min. Value	Max. Value	Example Entry
Monitored Number	A	6			5000
Attendant Name	A	8			Smith
TTY	A	25			5000
Supervisor Flag	A	1	n		n

Field Definitions

- The **Monitor Number** field specifies the monitor number the attendant will dial to log on and log off the system.
- The **Attendant Name** field specifies the attendant name that will be used in attendant reports.
- The **TTY** field specifies the unique TTY device used by the attendant. Since stand alone attendants do not use an actual TTY device, the monitored number value may be entered again in this field to ensure that the TTY value is unique.
- The **Supervisor Flag** fields specifies if the attendant is a supervisor. It may be set to 'Y' or 'y' to indicate the attendant is a supervisor, or to 'N' or 'n' to indicate the attendant is not a supervisor.

Application Database File - filename 'Attmon'.

The **Attmon** application database structure is shown in the table below:

Field Description	Data Type
Monitored Number	ASCII
Attendant Name	ASCII
TTY	ASCII
Supervisor Flag	ASCII

Attendant Monitor Database (cont)**Configuring the Attendant Monitor Database**

The database is initially blank. It must be configured before the *Attendant Monitor* application can operate. The database values are set using the APM Applications Manager Main Menu-- Selecting the **Application Configuration** option. The general sequence is the following:

1. Build a Master Database File

Enter data into the master database fields to add the necessary Monitored Number, Attendant Name, TTY, and Supervisor Flag values for *Attendant Monitor*.

2. Process the Application Database

Use the **Process Application Databases** option on the APM Database Administration menu to create the application database file.
(When the **Process** option is activated, data is drawn from the master database and converted to the formats specified in the application definition file.)

3. Install the Application Database

Use the **Install Application Databases** option on the APM Database Administration menu to enable *Attendant Monitor* to copy its database.

Note: *Refer to the APM Operations Manual for more detailed instructions on adding a database.*

AMNO: PBX assignment of Monitored Number

Each monitored number that is specified in the *Attendant Monitor* database must be created on the PBX using the AMNO command.

Note: *Refer to the NEAX2400 IMS system manuals for detailed procedures for making the data assignments at the NEAX MAT.*

Continue to the Tenant Number database on the next page...

Tenant Number Database

The Tenant Database is an APM database used by the *Attendant Monitor* application and other OAI applications. It provides a mechanism for retrieving the tenant number of an extension.

The Tenant Number database consists of a Master Database file component and an Application Database file component:

Master Database File - filename 'tenant_m'.

The **tenant_m** master database structure and example entries are shown in the table below:

Field Name	Type	Size	Min. Value	Max. Value	Example Entry
First Extension	ASCII	10			0
Last Extension	ASCII	10			99999
Tenant Number	Numeric	3	1	255	1

Field Definitions

- The **Tenant Number** field contains the Tenant Number that is used by one or more extensions. Tenant Numbers are associated with extensions using the following methods:
- A Tenant Number may be associated with a set of extensions defined by the **First** and **Last Extension** fields. The First Extension field contains the smallest extension number in the set, and the Last Extension field contains the largest extension number in the set.
- A Tenant Number may be associated with a single extension by setting the First and Last Extension fields to the same extension value.
- A Tenant Number may be associated with a single extension that contains a non-numeric character such as '*' or '#'. The First Extension field contains the extension value, and the Last Extension field is left blank.

Application Database File - filename 'tenants'.

The **tenants** application database structure is shown in the table below:

Field Description	Data Type
First Extension	ASCII
Last Extension	ASCII
Tenant Number	Short Integer

Tenant Number Database (cont)

Configuring the Tenant Number Database

This database must be configured before the *Attendant Monitor* application can operate. The database values are set using the APM Applications Manager Main Menu-- Selecting the **Application Configuration** option. The general sequence is the following:

- 1. Build a Master Database File**

Enter data into the master database fields to add the necessary phone line numbers.

- 2. Process the Application Database**

Use the **Process Application Databases** option on the APM Database Administration menu to create the application database file.
(When the **Process** option is activated, data is drawn from the master database and converted to the formats specified in the application definition file.)

- 3. Install the Application Database**

Use the **Install Application Databases** option on the APM Database Administration menu to enable *Attendant Monitor* to copy its database.

Note: *Refer to the APM Operations Manual for more detailed instructions on adding a database.*

Initialize Component

The *Attendant Monitor* component must be initialized from the APM. Follow the steps below to initialize the **AttendantMonitor** component:

- On the APM System Operations Menu, select the **Non-CRT Application Control** option.
- Use the **Initialize** command to start up the “AttendantMonitor” component.

This completes the Attendant Monitor application installation and configuration...

Chapter 3 ADMINISTRATOR TASKS

A change of attendant personnel or changes to monitored numbers will require the databases used by *Attendant Monitor* to be modified. Specific database records must be modified to reflect these changes. The following must be changed:

- **Attendant Monitor Database** to reflect changes to attendant names, numbers, or other values.
- **AMNO** command to make changes on the PBX.
- **Tenant Number Database** for any changes to numbers.

Perform the following procedures to make changes to the *Attendant Monitor* databases:

Note: *Refer to the procedural instructions in the APM Operations Manual. If you encounter messages during this process, refer to the “Process” and “Error Messages” chapters of the APM Operations Manual.*

Attendant Monitor Database Records

Perform the following steps to add, modify, or delete records:

- 1. Build a Master Database File**
Enter data into the master database fields to change the Monitored Number, Attendant Name, TTY, or Supervisor Flag values.
- 2. Process the Application Database**
Use the **Process Application Databases** option on the APM Database Administration menu to create the *application database* file.
(When the **Process** option is activated, data is drawn from the master database and converted to the formats specified in the application definition file.)
- 3. Install the Application Database**
Use the **Install Application Databases** option on the APM Database Administration menu to enable *Attendant Monitor* to copy its database.

AMNO: PBX assignment of Monitored Number

Any monitored number that is added, changed, or deleted in the *Attendant Monitor* database must be so modified on the PBX using the AMNO command.

Note: *Refer to the NEAX2400 IMS system manuals for detailed procedures for making the data assignments at the NEAX MAT.*

Tenant Number Database Records

Any changes to monitored numbers will also require a change to the Tenants database. Perform the following steps to add, modify, or delete records:

1. Build a Master Database File

Enter data into the master database fields to change the necessary extension numbers.

2. Process and Tenant the Application Database

Use the **Process Application Databases** option on the APM Database Administration menu to create the *application database* file.
(When the **Process** option is activated, data is drawn from the master database and converted to the formats specified in the application definition file.)

3. Install the Application Database

Use the **Install Application Databases** option on the APM Database Administration menu to enable *Attendant Monitor* to copy its database.

Chapter 4 ATTENDANT TASKS

The only attendant tasks associated with Attendant Monitor is the login and logout of an attendant. Follow the steps below:

Login and Logout

Step 1: At an attendant console, press one of the loop keys to seize a loop.

Step 2: Dial your monitored number assigned by the Administrator.

- If not logged in, you will now be logged in at the console.
- If logged in at another console, you will be logged out at the other console and logged in at this console

After the login or logout, the loop is automatically released.

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